## **Aggregate Shoulders (BDE)**

Effective: November 1, 1999

Revise Article 481.01 of the Standard Specifications to read:

"481.01 Description. This work shall consist of furnishing, placing, shaping and compacting aggregate on a prepared subgrade adjacent to the edges of the completed pavement structure or stabilized shoulder."

## **CONSTRUCTION REQUIREMENTS**

Revise Article 481.04 of the Standard Specifications to read:

"481.04 General. The road shall be opened to traffic according to Article 701.05(a)(1). Before placing the aggregate the subgrade shall be prepared in a manner approved by the Engineer.

The shoulders shall be constructed in layers of not more than 150 mm (6 inches) thick when compacted, except that if tests indicate the desired results are being obtained, the compacted thickness of any layer may be increased to a maximum of 200 mm (8 inches). The aggregate shall be deposited directly on the prepared subgrade or on the preceding layer of compacted aggregate with a spreader.

If any subgrade material is worked into the aggregate during the compacting or finishing operation, all granular material within the affected area shall be removed and replaced with new aggregate.

The shoulders shall be constructed to the thicknesses shown on the plans. Thickness determinations shall be made at such points as the Engineer may select. When the constructed thicknesses are less than 90 percent of the thicknesses shown on the plans, aggregate shall be added to obtain the required thicknesses; however, the surface elevation of the completed shoulders shall not exceed by more than 3 mm (1/8 inch) the surface elevation shown on the plans or authorized by the Engineer.

(a) Aggregate Shoulders, Type A. Before the aggregate is deposited on the subgrade, it shall contain sufficient moisture to provide satisfactory compaction. The water and aggregate shall be mixed at a central mixing plant. The plant shall be equipped with a mechanical mixing device, and aggregate and water measuring devices, meeting the approval of the Engineer. Wetting the aggregate in cars, bins, stockpiles or trucks will not be permitted.

Each layer of material shall be compacted with a tamping roller, or with a pneumatictired roller, or with a vibratory machine, or with a combination of any of the 3 until the compaction has been approved by the Engineer. If the moisture content of the material is not such as to permit satisfactory compaction during the compacting operations, water shall be added in such quantity that satisfactory compaction can be obtained. The top layer shall be given a final rolling with a three-wheel or tandem roller. Three-wheel or tandem rollers shall weigh from 5.5 to 9 metric tons (6 to 10 tons) and not less than 35 N/mm (200 lbs. per inch) nor more than 55 N/mm (325 lbs. per inch) of width of the roller.

(b) Aggregate Shoulders, Type B. Before placing the aggregate wedge shoulder, Type B, the weeds and grass on the area to be covered shall be cut. The aggregate shall be deposited in its final position with a spreader and compacted to the satisfaction of the Engineer. If the moisture content of the aggregate is not such as to permit satisfactory compaction during the rolling operations, water shall be added in such quantity that satisfactory compaction can be obtained."

Delete the last sentence of Article 481.06 of the Standard Specifications.

80003